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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,193	06/05/2006	Alexander Golitschek Edler Von Elbwart	L7725.06101	9530
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Dickinson Wright PLLC James E. Ledbetter, Esq. International Square 1875 Eye Street, N.W., Suite 1200 Washington, DC 20006			EXAMINER RIZK, SAMIR WADIE	
			ART UNIT 2112	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/565,193

Applicant(s)GOLITSCHKE EDLER VON
ELBWART ET AL.**Examiner**

SAM RIZK

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-22 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-22 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

- Response to the applicant's amendment dated 4/2/2009
- Claims 11, 23 and 24 have been Cancelled
- Amended claims 1-11, 12-22 and 25 have been submitted for examination
- Amended claims 1-11, 12-22 and 25 have been rejected

Specification

1. In view of the applicant's amended specifications, all objections to the specification are withdrawn.

Response to Arguments

2. Applicant's arguments filed on 4/2/2009 have been fully considered but they are not persuasive.
3. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., Although the Office Action proposes that E1-Gamal discloses the subject matter of claim 11 in paragraph [0045], the Applicants submit that E1-Gamal does not identify the length of a code block/code block segment in paragraph [0045] and does not indicate that code blocks/code block segments may have different lengths. As described in the instant published specification, a code block/code block segment is a logical unit of information bits that is

encoded independently of all other code blocks/code block segments (see published specification, paragraphs [0034]-[0043])) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, **limitations from the specification are not read into the claims.** See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

4. The Examiner disagrees with the applicant and maintains the rejection of claims (1-10 and 12-22) as in the office action mailed on 1/2/2009. All the amendments and arguments have been considered. It is the Examiner's conclusion that claims (1-10 and 12-22) is not patentably distinct or non-obvious over the prior art of record in view of the reference, Gamal. Therefore the rejection is maintained.
5. Update of claims 1-10, 12-22 and 25 rejections follows.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-10, 12-22 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by El-Gamal et al. US publication no. 2001/0034868 (Hereinafter Gamal).

- In regard to claim 1, Gamal teaches:

(Currently Amended) A method of encoding an information bit sequence forming a code block in a communication device of a communication system, the method comprising the steps of:

- distributing the bits of the information bit sequence forming a code block having a length k bits into a plurality of n subsets of information bits, each subset forming a code block segment having a length $k_1 \dots k_n$ bits respectively;

(Figure 5, ref. (206), (208) & (210) and section [0027] in Gamal)

- supplementing at least one code block segment with information bits by partial repetition of the information bit sequence which have also been distributed to at least one different code block segment or by zero stuffing, such that the sum of the lengths $k_1 \dots k_n$ of the code block segments is larger than the code block length k ; and

(Section [0040] and [0045], lines (7-9) wherein Gamal teaches partial repetition of the information bits)

- encoding the code block segments and the at least one supplemented code block segment individually using at least one encoding method.

(Figure 5, ref. (218), (220) & (222) and section [0027] in Gamal)

7. In regard to claim 2, Gamal teaches:

The method according to claim 1, further comprising the step of encoding the information bit sequence forming the code block individually and separate from the encoding operations of the plurality of code block segments.

(Figure 5, $x(t)$ (202) and the code block segments (206), (208) & (210) in Gamal)

8. In regard to claim 3, Gamal teaches:

- The method according to claim 2, wherein the step of encoding the information bit sequence is performed in a second coding branch arranged in parallel to a first coding branch, wherein the distribution and encoding operations on the first plurality of code block segments are performed in the first coding branch independently of the encoding operations in the second coding branch.
(Figure 5, $x(t)$ (202) and the code block segments (206), (208) & (210) and constituent encoders (218), (220) & (222) in Gamal)

9. In regard to claim 4, Gamal teaches:

The method according to claim 1, wherein the encoding steps of the code blocks and/or the code block segments are performed in a time diversity manner.
(section [0040] in Gamal)

10. In regard to claim 5, Gamal teaches:

The method according to claim, further comprising the additional step of buffering at least a portion of either the code block or the code block segments prior to the encoding step.
(Figure 5, ref. (502) in Gamal)

11. In regard to claim 6, Gamal teaches:

The method according to claim 1, wherein the encoding of the code block segments or code blocks is performed using different encoding methods.

(Figure 5 the independent constituent encoders (218), (220) & (222) in Gamal)

12. In regard to claim 7, Gamal teaches:

The method according to claim 1, wherein the encoding steps use at least one of convolutional codes, trellis codes, turbo codes, Reed-Solomon codes, parity check codes.

(section [0004], line 3 in Gamal)

13. In regard to claim 8, Gamal teaches:

The method according to claim 1, wherein the encoding step of the code block segments or code blocks is performed in a plurality of parallel coding subbranches.

(Figure 5 the independent constituent encoders (218), (220) & (222) in Gamal)

14. In regard to claim 9, Gamal teaches:

(Currently Amended) The method according to claim 1, wherein the information bits of the code block segments are at least partly identical to each other to form an information overlap.

(section [0040] in Gamal)

15. In regard to claim 10, Gamal teaches:

The method according to claim 1, wherein the segmentation of the code blocks is performed into code block segments of equal length.

(section [0045] in Gamal)

16. In regard to claim 12, Gamal teaches:

The method according to claim 1, wherein the bits of the code blocks and code block segments are combined after encoding to form a code word corresponding to the original information bit sequence before encoding.

(Figure 1, (ref. (110)in Gamal)

17. In regard to claim13, Gamal teaches;

The method according to claim 1, further comprising the step of interleaving the information bits of one or more coding branches and/or subbranches.

(Figure 5, ref (502) in Gamal)

18. In regard to claim 14, Gamal teaches:

The method according to claim 13, wherein the interleaving step uses different interleaving patterns for different coding branches or subbranches.

(Figure 2, ref (12), (214) & (216)in Gamal)

19. In regard to claim 15, Gamal teaches:

The method according claim 13, -wherein the step of interleaving the information bits is performed after distribution and prior to the encoding step into code block segments.

(Figure 5 in Gamal)

20. In regard to claim 16, Gamal teaches:

The method according to claim 1, further comprising the step of adjusting the length of the code block prior to its separation into code block segments.

(section [0045] in Gamal)

21. In regard to claim 17, Gamal teaches:

The method according to claim 16, wherein the adjustment is obtained by appending termination bits to the information bit sequence in at least one coding branch or coding subbranch
(section [0045] in Gamal)

22. In regard to claim 18, Gamal teaches:

The method according to claim 1, further comprising the step of including an error detection code inserted before the encoding step.
(Figure 2, ref (12), (214) & (216) and figure 3 in Gamal)

23. In regard to claim 19, Gamal teaches:

The method according to claim 1, wherein the distribution is performed by periodically switching the input bit sequence to at least one of the coding branch or subbranch and repeating the application of bits of the input bit sequence to another coding branch or subbranch.
(Figure 6, "Bit Selector's" in Gamal)

24. In regard to claim 20, Gamal teaches:

The method according to claim 1, wherein the distribution is performed using a transition vector or matrix which signifies which input bit shall be distributed to which coding branch or subbranch.
(Figure 6, "Bit Selector's" in Gamal)

25. in regard to claim 21, Gamal teaches:

The method according to claim[1, wherein the distribution is performed using a

puncturing vector or matrix that determines which bits can pass through and which bits are removed for a particular coding branch or subbranch.

(Figure 7, step (712) in Gamal)

26. in regard to claim 22, Gamal teaches:

The method according to claim 1, further comprising the step of choosing which part of the information bit sequence has higher priority than other parts of said sequence and selecting this part of the information bit sequence for the supplementing step, wherein the information bits are distributed to different code block segments.

(Figure 7, step (704) in Gamal)

27. Claim 25 is rejected for the same reasons as per claim 1.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Rizk whose telephone number is (571) 272-8191. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronics Business Center (EBC) at 866-217-9197 (toll-free)

/Sam Rizk/

Examiner, Art Unit 2112

/Guy J Lamarre/

Primary Examiner, Art Unit 2112